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10/090,123	03/05/2002	Martin J. Weitz	AP-001	3566

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09/16/2003

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EXAMINER

HINZE, LEO T

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/090,123	<b>Applicant(s)</b> WEITZ, MARTIN J.	
	<b>Examiner</b> Leo T. Hinze	<b>Art Unit</b> 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 9 is objected to because of the following informalities: in line 1 of the claim, it appears that “of” should be inserted between “stream” and “liquid”.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams et al., US 4,178,652.

Regarding claim 1, Adams teaches a method of cleaning surfaces of an anilox roller (30, col. 1, lines 21-23) comprising the steps of: providing an anilox roller having surfaces to be cleaned of dried ink and other material residue; providing a source of pressurized steam (42); and directing a jet of said pressurized steam (col.2, lines 53-55) from said source onto said surfaces of said anilox roller, thereby removing said dried ink and other material residue from said surfaces of said anilox roller.

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Regarding claim 2, Adams also teaches wherein said pressurized steam has a pressure of up to 1600 psi (col. 3, line 57).

Regarding claim 3, Adams also teaches wherein said pressurized steam has a pressure of between 50 and 600 psi (col. 3, line 57).

Regarding claim 4, Adams also teaches wherein said pressurized steam has a pressure of between 50 and 250 psi (col. 3, line 57).

Regarding claim 15, Adams teaches an apparatus (10) for cleaning dried ink and other material residue from surfaces of an anilox roller comprising: a source of pressurized steam (42); means for holding and rotating said anilox roller (14, 60); and means (40) for directing at least one jet of said pressurized steam onto said surfaces of said anilox roller to remove said dried ink and other material residue.

Regarding claim 16, Adams also teaches wherein said means for directing at least one jet of pressurized steam comprises at least one steam supply line (44) and at least one steam jet nozzle (40).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, in view of Ahvenniemi et al., US 5,651,832.

Regarding claims 5-7, Adams teaches all that is claimed as discussed in the rejection of claims 1-4 and 15-16 above, except:

- wherein said pressurized steam has a temperature of up to 350°F (claim 5);
- wherein said steam has a temperature of between 220 and 300°F (claim 6);
- wherein said steam has a temperature of between 220 and 260°F (claim 7).

Ahvenniemi teaches a method for cleaning rolls with steam at a temperature of 248 °F (col. 3, line 62). Ahvenniemi teaches that steam at this temperature is effective at softening the particles on the roll (col. 3, lines 58-65).

Regarding claims 5-7, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Adams wherein the temperature of the steam was 248 °F, because Ahvenniemi teaches that this is an optimal temperature for softening the particles on the roll.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, in view of Holmes, US 2,571,575.

Adams teaches all that is claimed as discussed in the rejection of claims 1-4 and 15-16 above, except wherein said pressurized steam has a liquid water content of up to 10%.

Holmes teaches a steam cleaning apparatus which allows the operator to select a wide variety of steam/water mixes, including 10% water.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Adams wherein said pressurized steam has a liquid water content of up to 10%, because Holmes teaches an apparatus which can provide such a mixture, and one having ordinary skill in the art would arrive at this optimal steam/water mixture in the course of routine experimentation.

7. Claims 9 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, in view of Arant, US 2,919,070.

Adams teaches all that is claimed as discussed in the rejection of claims 1-4 and 15-16 above, except:

- the further step of directing a stream liquid water onto said surfaces of said anilox roller after said step of directing a jet of said pressurized steam (claim 9);
- a means for directing at least one stream of liquid water onto said surfaces of said anilox roller to rinse away said dried ink and other material residue (claim 17);
- wherein said means for directing at least one stream of liquid water includes a source of liquid water, a transport line, and a spray nozzle (claim 18).

Arant teaches a method of steam cleaning and liquid rinsing, including:

- the further step of directing a stream liquid water onto said surfaces after said step of directing a jet of said pressurized steam (col. 8, lines 42-49) (claim 9);
- a means for directing at least one stream of liquid water (79) onto said surfaces to rinse away said dried ink and other material residue (claim 17);

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- wherein said means for directing at least one stream of liquid water includes a source of liquid water, a transport line, and a spray nozzle (79, 11) (claim 18).

Regarding claims 9 and 17-18, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Adams to include the step and means for directing a stream liquid water onto said surfaces after said step of directing a jet of said pressurized steam, because Arant teaches that such a method and apparatus are advantageous and well-known in the art of steam cleaning.

8. Claims 10 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, in view of Sondergeld et al., US 5,911,175.

Adams teaches all that is claimed as discussed in the rejection of claims 1-4 and 15-16 above, except:

- the further step of providing a surfactant or degreasing compound on the surfaces of said anilox roller before said step of directing a jet of said pressurized steam (claim 10);
- including a means for directing at least one stream of surfactant or degreasing compound onto the surfaces of said anilox roller (claim 19);
- wherein said means for directing at least one stream of surfactant or degreasing compound includes a source thereof, a transport line, and an applicator nozzle (claim 20).

Sondergeld teaches a method of cleaning a printing machine cylinder surface including:

- effectively cleaning a printing machine cylinder having surface structures with surface valleys (col. 1, lines 40-41);

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- washing the surface with a cleaning fluid, which preferably is water or steam (col. 1, lines 53-54);
- a high pressure washing device adapted for directing a cleaning fluid to the surface (col. 2, lines 50-52);
- the further step of providing a surfactant on the surfaces of said roller before said step of directing a jet of said pressurized steam (col. 2, lines 56-61) (claim 10);
- that such a cleaning method is effective for cleaning a printing machine cylinder surface of strongly adhering dirt, such as paper dust or hardened printing inks (col. 1, lines 36-38).

Regarding claims 10 and 19-20, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Adams to include the step and means for providing a surfactant or degreasing compound on the surfaces of said anilox roller before said step of directing a jet of said pressurized steam, because Sondergeld teaches that such a method and apparatus is effective for cleaning a printing machine cylinder surface of strongly adhering dirt, such as paper dust or hardened printing inks.

9. Claims 11-14, 21-24, and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, in view of Gydesen, US 5,644,986.

Adams teaches all that is claimed as discussed in the rejection of claims 1-4 and 15-16 above, including:

- wherein said apparatus is a stand alone anilox roller cleaning unit (claim 31).

Adams does not teach:



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- collecting the removed ink and other material residue from said roller via gravity-fed liquid collection, vacuum collection, or both (claim 11);
- wherein said removed ink and other material residue are collected from said roller via vacuum collection (claim 12);
- transporting the collected ink and other material residue to a disposal system (claim 13);
- disposing of said collected ink and other material residue (claim 14);
- means for collecting said removed ink and other material residue from said anilox roller (claim 21);
- wherein said means for collecting said removed ink and other material residue from said anilox roller comprises at least one of a vacuum collection system, a gravity-fed liquid collection system, or both in combination (claim 22);
- wherein said means for collecting said removed ink and other material residue from said anilox roller comprises a vacuum collection system (claim 23);
- wherein said vacuum collection system includes at least one vacuum port and at least one vacuum waste disposal line (claim 24);
- wherein said means for directing at least one jet of high pressure steam onto the surface of said anilox roller and said vacuum collection system are combined into a single cleaning head (claim 27);
- wherein said cleaning head is adapted to raster-scan the length of the anilox roller as it cleans the roller (claim 28);

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- a traction unit for raster scanning said cleaning head (claim 29);
- wherein said cleaning head spans the entire length of the anilox roller (claim 30);
- wherein said apparatus is adapted to be temporarily attached to a flexographic print machine for cleaning of the anilox roller thereof (claim 32);
- wherein said apparatus is adapted to be permanently attached to a flexographic print machine for cleaning of the anilox roller thereof (claim 33).

Gydesen teaches a method and apparatus for cleaning a roller surface in a printing machine, including:

- method (col. 3, lines 34-44) and apparatus for collecting, transporting, and disposing removed ink from said roller via vacuum collection, including at least one vacuum port (25) and one vacuum waste disposal line (14) (claims 11-14 and 21-24);
- wherein said means for directing at least one jet of high pressure steam onto the surface of said anilox roller and said vacuum collection system are combined into a single cleaning head (5) (claim 27);
- wherein said cleaning head is adapted to raster-scan the length of the anilox roller as it cleans the roller (Fig. 1) (claim 28);
- a traction unit for raster scanning said cleaning head (4, 6, 7) (claim 29);
- wherein said cleaning head spans the entire length of the anilox roller (Fig. 4) (claim 30);
- wherein said apparatus is adapted to be attached to a flexographic print machine for cleaning of the anilox roller thereof (col. 2, lines 53-55) (claims 32 and 33);

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- that the methods and apparatus are advantageous for cleaning automatically and while the printing process is running, and for reducing the amount of time for the cleaning process (col. 3, lines 2-7).

Regarding claims 11-14 and 21-24, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Adams to include method and apparatus for collecting, transporting, and disposing removed ink from said roller via vacuum collection, including at least one vacuum port and one vacuum waste disposal line, because Gydesen teaches that such methods and apparatus are advantageous for performing cleaning while the printing process is running.

Regarding claims 27-30, 32, and 33, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Adams to attach the cleaning apparatus to the printing machine and to provide the apparatus in either of the configurations including a scanning cleaning head or a single head spanning the entire roller, because Gydesen teaches that such arrangements are advantageous for reducing the amount of time used during the cleaning process.

Regarding claim 31, the combination of Adams and Gydesen teaches all that is claimed as discussed above.

10. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Gydesen as applied to claims 11-14, 21-24, and 27-33 above, and further in view of Seefried, US 5,953,994.

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The combination of Adams and Gydesen teaches all that is claimed as discussed in the rejection of claims 11-14, 21-24, and 27-33 above, except:

- wherein said means for collecting said removed ink and other material residue from said anilox roller comprises a gravity-fed liquid collection system (claim 25);
- wherein said gravity-fed liquid collection system includes at least one liquid drip pan (claim 26).

Seefried teaches a cleaning device for a rotary printing press, including:

- wherein said means for collecting said removed ink and other material residue from said roller comprises a gravity-fed liquid collection system (Fig. 1) (claim 25);
- wherein said gravity-fed liquid collection system includes at least one liquid drip pan (6) (claim 26);
- a collecting pan allows dirty cleaning fluid to be easily collected and disposed of (col. 1, lines 50-56).

Regarding claims 25 and 26, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Adams wherein said gravity-fed liquid collection system includes at least one liquid drip pan, because Seefried teaches that a drip pan is advantageous for easily collecting and disposing of dirty cleaning fluid.

11. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Gydesen as applied to claims 11-14, 21-24, and 27-33 above, and further in view of Grembecki et al., US 3,309,993.

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The combination of Adams and Gydesen teaches all that is claimed as discussed in the rejection of claims 11-14, 21-24, and 27-33 above, except:

- wherein said apparatus is attached to said flexographic print machine using at least one mounting bracket (claim 34);
- wherein said apparatus is pivotally attached to at least one mounting bracket such that the cleaning apparatus may be pivoted towards said anilox roller to clean it and pivoted away from said anilox roller when not in use (claim 35).

Grembecki teaches a printing cylinder cleaner, including:

- wherein said apparatus is attached to said flexographic print machine using at least one mounting bracket (32) (claim 34);
- wherein said apparatus is pivotally attached to at least one mounting bracket such that the cleaning apparatus may be pivoted towards said anilox roller to clean it and pivoted away from said anilox roller when not in use (col. 4, lines 6-7) (claim 35).

Regarding claims 34 and 35, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Adams wherein said apparatus is attached to said flexographic print machine using at least one mounting bracket and wherein said apparatus is pivotally attached to at least one mounting bracket such that the cleaning apparatus may be pivoted towards said anilox roller to clean it and pivoted away from said anilox roller when not in use, because Grembecki teaches that pivoting cleaning assemblies are well known in the art, and one having ordinary skill would recognize that a pivoting assembly would be an acceptable alternative configuration to the non-pivoting assembly of Adams.

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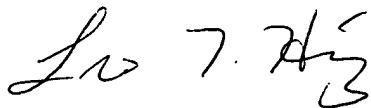
***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Munz, US 6,561,096, Gottling, US 6,006,666, Christianson, US 5,948,740, and Ahvenniemi et al., US 5,519,945 each teach roller cleaning methods and apparatus having obvious similarities to the instant application.

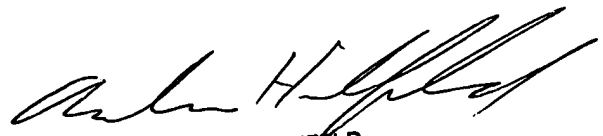
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (703) 305-3339. The examiner can normally be reached on M-F 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0952.



Leo T. Hinze  
Patent Examiner  
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25 August, 2003



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